

WHAT IS CLAIMED IS:

1. Process for adjusting clearing limits, defects in the yarn being cut out and a clearing limit separating defects which are to be cut out from defects which are not to be cut out, the process comprising the steps of:

5 starting from the clearing limit, producing displays of defects in an end product that make an effect of the defects in the end product visible.

2. Process according to claim 1, wherein the defects displayed are the most disruptive defects that still remain in the end product after clearing.

10 3. Process according to claim 1, wherein defects in a yarn are shown as a display.

15 4. Process according to claim 1, wherein defects in a fabric are shown as a display.

5. Process according to claim 4, wherein the display reveals the type of defects.

20 6. Process according to claim 5, wherein the display emphasizes the effect of the distribution of the defects in the end product.

7. Device for adjusting clearing limits, comprising:
a yarn clearer;

a computer, connected to the yarn clearer, configured to execute the step

of:

917

starting from a clearing limit, producing displays of defects in an end product that make an effect of the defects in the end product visible; and a means, connected to the computer, for displaying examples of defects.

5

8. Device according to claim 7, wherein the computer uses prestored displays of defects.

9

9. Device according to claim 7, wherein the computer has a program for producing defect images.

10

10. Device according to claim 7, wherein fields which can be selected thereon are provided, by means of which the calculation of a clearing limit can be triggered.

15

11. A method for adjusting clearing limits, comprising the steps of: selecting a clearing limit for eliminating at least one defect in a yarn; displaying, from a database of yarn defect images, at least one image of a first yarn defect associated with the clearing limit, wherein the at least one image of the first yarn defect includes yarn defects that are not eliminated by the clearing limit;

20

modifying the clearing limit based upon an appraisal of the displayed at least one image of the first yarn defect; and storing the modified clearing limit.

917
5

12. The method of claim 11, further comprising the step of:
storing a plurality of images of yarn defects in the database of yarn defect
images.

13. The method of claim 12, wherein each of the plurality of images of
yarn defects is stored in the database of yarn defect images according to at least
one of a clearing limit and a yarn type.

10

14. The method of claim 11, further comprising the step of:
displaying, from the database of yarn defect images, at least one image of
a second yarn defect associated with the modified clearing limit, wherein the at
least one image of the second yarn defect includes yarn defects that are not
eliminated by the modified clearing limit.

15

15. The method of claim 14, further comprising the step of:
interpolating an image of at least one of the first and second yarn defects
using at least two yarn defect images from the database of yarn defect images, if
the image of at least one of the first and second yarn defects is not stored in the
database of yarn defect images.

20

16. The method of claim 11, further comprising the step of:
displaying an expected number of clearer cuts for the modified clearing
limit.

25

17. The method of claim 11, wherein the step of displaying further
comprises the step of:

displaying a first image of a simulated fabric made from a first simulated yarn associated with the clearing limit, wherein the first simulated yarn includes yarn defects that are not eliminated by the clearing limit.

18. The method of claim 17, wherein the step of displaying further comprises the step of:

modifying the clearing limit based upon an appraisal of the displayed first image of the simulated fabric.

19. The method of claim 18, wherein the step of displaying further comprises the step of:

displaying a second image of the simulated fabric made from a second simulated yarn associated with the modified clearing limit, wherein the second simulated yarn includes yarn defects that are not eliminated by the modified clearing limit.

20. The method of claim 19, wherein the step of displaying further comprises the step of:

displaying at least one of a number and position of the yarn defects within at least one of the first and second images of the simulated fabric.

21. The method of claim 11, further comprising the step of:
measuring values for yarn defects in the yarn.

ai 7₅

22. The method of claim 21, further comprising the steps of:
classifying the measured values according to at least one parameter
associated with the yarn defects; and
displaying the classified values in a classification area.

23. The method of claim 22, wherein the clearing limit is selected from
the classification area.

10 24. The method of claim 22, wherein the modified clearing limit is
selected from the classification area.

15 25. The method of claim 22, wherein the at least one parameter
associated with the yarn defects includes a deviation of at least one of a diameter
and a mass of the yarn from a predetermined value.

26. The method of claim 22, wherein the at least one parameter
associated with the yarn defects includes a length of the yarn defect in the yarn.

20 27. The method of claim 11, further comprising the step of:
operating a yarn clearer using the modified clearing limit.

25 28. A system for adjusting clearing limits, comprising:
a memory that stores a database of yarn defect images and the steps of a
computer program to:
select a clearing limit for eliminating at least one defect in a yarn,

display, from the database of yarn defect images, at least one image of a first yarn defect associated with the clearing limit, wherein the at least one image of the first yarn defect includes yarn defects that are not eliminated by the clearing limit,

modify the clearing limit based upon an appraisal of the displayed at least one image of the first yarn defect, and

store the modified clearing limit;

a processor for accessing the memory to execute the computer program;

and

means for displaying yarn defect images.

29. The system of claim 28, further comprising:

an evaluation unit that determines properties of the yarn;

a controller for establishing the clearing limit; and

a yarn clearer that clears defects from the yarn in accordance with the established clearing limit.

30. The system of claim 28, wherein the memory stores steps of a computer program to:

store a plurality of images of yarn defects in the database of yarn defect images.

31. The system of claim 30, wherein each of the plurality of images of yarn defects is stored in the database of yarn defect images according to at least one of a clearing limit and a yarn type.

32. The system of claim 28, wherein the memory stores steps of a computer program to:

display, from the database of yarn defect images, at least one image of a second yarn defect associated with the modified clearing limit, wherein the at least one image of the second yarn defect includes yarn defects that are not eliminated by the modified clearing limit.

33. The system of claim 32, wherein the memory stores steps of a computer program to:

interpolate an image of at least one of the first and second yarn defects using at least two yarn defect images from the database of yarn defect images, if the image of at least one of the first and second yarn defects is not stored in the database of yarn defect images.

34. The system of claim 28, wherein the memory stores steps of a computer program to:

display an expected number of clearer cuts for the modified clearing limit.

35. The system of claim 28, wherein the memory stores steps of a computer program to:

display a first image of a simulated fabric made from a first simulated yarn associated with the clearing limit, wherein the first simulated yarn includes yarn defects that are not eliminated by the clearing limit.

36. The system of claim 35, wherein the memory stores steps of a computer program to:

modify the clearing limit based upon an appraisal of the displayed first image of the simulated fabric.

37. The system of claim 36, wherein the memory stores steps of a computer program to:

display a second image of the simulated fabric made from a second simulated yarn associated with the modified clearing limit, wherein the second simulated yarn includes yarn defects that are not eliminated by the modified clearing limit.

38. The system of claim 37, wherein the memory stores steps of a computer program to:

display at least one of a number and position of the yarn defects within at least one of the first and second images of the simulated fabric.

39. The system of claim 29, wherein the memory stores steps of a computer program to:

measure values for yarn defects in the yarn.

40. The system of claim 39, wherein the memory stores steps of a computer program to:

classify the measured values according to at least one parameter associated with the yarn defects; and

display the classified values in a classification area.

41. The system of claim 40, wherein the clearing limit is selected from the classification area.

42. The system of claim 40, wherein the modified clearing limit is selected from the classification area.

43. The system of claim 40, wherein the at least one parameter associated with the yarn defects includes a deviation of at least one of a diameter and a mass of the yarn from a predetermined value.

44. The system of claim 40, wherein the at least one parameter associated with the yarn defects includes a length of the yarn defect in the yarn.

45. The system of claim 29, wherein the memory stores steps of a computer program to:

operate the yarn clearer using the modified clearing limit.